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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,479	02/12/2004	Katsuhito Aoki	HGM-127-A	2304

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CARRIER BLACKMAN AND ASSOCIATES  
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NOVI, MI 48375

EXAMINER
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FRISBY, KESHA

ART UNIT	PAPER NUMBER
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3714

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/02/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/777,479

Applicant(s)

AOKI ET AL.

Examiner

Kesha Frisby

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 2/12/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1 & 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoki et al. (U.S. Patent Number 5,415,550).**

Referring to claim 1, Aoki et al. discloses a selector (abstract & column 25 lines 9-13) for selecting performance evaluation comments based on operator input in a simulated driving route sequence, by the driving operation of the operator in a driving route sequence determined in advance in a running route upon the simulation apparatus, and wherein the display unit comprises a screen (display apparatus 400) for simultaneously displaying the simulated operating environment and the performance evaluation comments when the driving situation is replayed on said display unit.

Referring to claim 3, Aoki et al. discloses further comprising: a speaker (column 4 lines 65-67) for reading the performance evaluation commentary aloud upon reproduction thereof on said display unit.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al. in view of Huston (U.S. Patent Number 6,146,143).**

Referring to claim 2., Aoki et al. discloses an interactive driving simulation apparatus according to claim 1. *Aoki et al. does not disclose wherein said selector selects only a scene at which an unsafe action was performed by the operator within the simulated driving route sequence, and matches performance evaluation comments corresponding to said scene at which an unsafe action was performed to the operator's recorded performance, and wherein said display screen displays only the scene at which the unsafe action was performed and the performance evaluation comments.* However, Huston et al. teaches wherein said selector selects only a scene at which an unsafe action was performed by the operator within the simulated driving route sequence, and matches performance evaluation comments corresponding to said scene at which an unsafe action was performed to the operator's recorded performance, and wherein said display screen displays only the scene at which the unsafe action was performed and the performance evaluation comments (column 8 lines 23-56). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a

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selector, as disclosed by Huston et al., incorporated into Aoki et al., so that the developer can show the user what driving methods were performed incorrectly.

**6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al. in view of Copperman (5,474,453) and Huston et al. (U.S. Patent Number 6,146,143).**

Referring to claim 4, Aoki et al. discloses an interactive driving simulation apparatus according to claim 1. *Aoki et al. does not disclose wherein: said display unit is operable to pause the replay and to display a still-screen image, in which the simulated operating environment and the performance evaluation commentary are simultaneously displayed thereon.* However, Copperman teaches wherein: said display unit is operable to pause the replay (column 16 lines 5 & 6) and to display a still-screen image, in which the simulated operating environment (column 16 lines 38 & 39: the frozen scenario). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include pause the replay, as disclosed by Copperman, incorporated into Aoki et al. in order for the instructor to discuss the driving situation with the user. *Cooperman does not disclose wherein the performance evaluation commentary are simultaneously displayed thereon.* However, Huston et al. teaches wherein the performance evaluation commentary are simultaneously displayed thereon (column 8 lines 23-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include displaying the performance evaluation commentary, as disclosed by Huston et al., incorporated into Aoki et al./Copperman so that the user is able to see how the user's statistics compare to other with other users.

**7. Claims 5 & 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al. in view of Copperman (U.S. Patent Number 5,474,453).**

Referring to claim 5, Aoki et al. discloses an interactive driving simulation apparatus according to claim 1. *Aoki et al. does not disclose wherein: said display unit reproduces the screen image at a normal replay speed or temporarily pauses the replay and displays a still-screen image at a selected driving situation, and performs fast-feeding replay or skipping replay at scenes other than the selected driving situation.* However, Copperman teaches wherein: said display unit reproduces the screen image at a normal replay speed or temporarily pauses the replay (column 16 lines 5 & 6) and displays a still-screen image at a selected driving situation (column 16 lines 38 & 39: the frozen scenario), and performs fast-feeding replay or skipping replay at scenes other than the selected driving situation (column 22 lines 35-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include replay, as disclosed by Copperman, incorporated into Aoki et al. in order to analyze the driving situation.

Referring to claim 6, Aoki et al. discloses the driving simulation apparatus of claim 1. *Aoki et al. does not disclose wherein the apparatus is operable without requiring input from any person other than the student operator during testing and replay.* However, Copperman teaches wherein the apparatus is operable without requiring input from any person other than the student operator during testing (column 4 lines 30-32) and replay (claims). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein the apparatus is operable without requiring input

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from any person other than the student operator during testing and testing, as disclosed by Copperman, incorporated into Aoki et al. so that the user has full control of how the simulator works.

**8. Claims 7 & 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al. in view of Copperman (U.S. Patent Number 5,660,547).**

Referring to claims 7 & 9, Aoki et al. discloses an electromechanical simulator (simulated motorcycle 300) for interacting with the student operator during performance of a driving route sequence, said electromechanical simulator comprising a support frame (body frame 302), a handlebar operatively connected to the support frame (steering handle 308), a pedal mechanism operatively connected to the support frame (inherent component of a motorcycle), and a plurality of sensors (column 5 lines 48-55) for measuring student input and for generating data corresponding to a specific performance by the student operator; a recorder (video signal recorder 532) for recording the specific performance data; a processor (cpu 10 and/or 11) for comparing the specific performance data to a set of base line performance data and for selecting performance evaluation comments based on the comparison of the specific performance data with the base line performance data, and a display unit comprising a display screen (display apparatus 400) for simultaneously displaying the simulated operating environment and the performance evaluation comments when a portion of the driving route sequence is replayed on said display unit for each testing situation in which the operator's responses fail to perform at or above a specified level; wherein a virtual environment is displayed as a screen image on the display unit based on a real-

time driving route sequence of a simulated vehicle by the student operator (Figs. 9A & 9B) and wherein selected features of the electromechanical simulator are operable to perform a first set of functions during performance of a real-time driving route sequence by a student operator (column 2 lines 22-32: change running modes) (claim 9). *Aoki et al. does not disclose wherein said apparatus is capable of recording a specific performance of a driving routine and replaying the specific performance on said display unit after the real-time driving routine is completed and wherein the selected features are operable to perform a second set of functions which is different from the first set of functions during playback of a recorded performance.* However, Copperman teaches wherein said apparatus is capable of recording a specific performance of a driving routine (column 47 lines 16-19) and replaying the specific performance on said display unit after the real-time driving routine is completed (column 38 lines 61-65) and wherein the selected features are operable to perform a second set of functions which is different from the first set of functions during playback of a recorded performance (column 39 lines 43-56). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include recording and replaying, as disclosed by Copperman in order to allow the student to review exactly how the student responded to certain driving conditions as the student actually perceived them when driving in the scenario.

Referring to claim 10, Aoki et al., as modified by Copperman, discloses further comprising a speaker for generating an audible reproduction of the selected performance evaluation comments (column 4 lines 65-67 of Aoki et al.).



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**9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al./Copperman ('547) and further in view of Copperman ('453).**

Referring to claim 6, Aoki et al./Copperman ('547) discloses the driving simulation apparatus of claim 7. *Aoki et al./Copperman ('547) does not disclose wherein the apparatus is operable without requiring input from any person other than the student operator during testing and replay.* However, Copperman ('453) teaches wherein the apparatus is operable without requiring input from any person other than the student operator during testing (column 4 lines 30-32) and replay (claims). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein the apparatus is operable without requiring input from any person other than the student operator during testing and testing, as disclosed by Copperman ('453), incorporated into Aoki et al./Copperman ('547) so that the user has full control of how the simulator works.

**10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster (U.S. Patent Number 3,577,857) in view of Aoki et al..**

Referring to claim 11, Schuster a) generating a prerecorded driving simulation course including a plurality of testing situations on a display screen of a driving simulator (preprogrammed film), b) recording the operator's real-time responses to each testing situation on a computer memory (column 2 lines 7-9); c) comparing the operator's responses to prerecorded base line data (column 2 lines 9-15). *Schuster does not disclose d) replaying selected scenes from the simulation course on the display screen superimposed with selected performance evaluation comments corresponding to the*

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*operator's recorded responses, for each testing situation in which the operator's responses fail to perform at or above a specified level.* However, Aoki et al. teaches d) replaying selected scenes from the simulation course on the display screen superimposed with selected performance evaluation comments corresponding to the operator's recorded responses, for each testing situation in which the operator's responses fail to perform at or above a specified level (column 11 lines 67-column 12 lines 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include replaying selected scenes, as disclosed by Aoki et al., incorporated into Schuster in order to show the user the problems that were made during riding.

**11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster/Aoki et al. and further in view of Copperman ('453).**

Referring to claim 12, Schuster/Aoki et al. discloses the method of claim 11.

*Schuster/Aoki et al. does not disclose wherein the method is performable without requiring input from any person other than the student operator during testing and replay.* However, Copperman ('453) teaches wherein the method is performable without requiring input from any person other than the student operator during testing (column 4 lines 30-32) and replay (claims). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein the apparatus is operable without requiring input from any person other than the student operator during testing and testing, as disclosed by Copperman ('453), incorporated into Schuster/Aoki et al. so that the user has full control of how the simulator works.

**12. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster/Aoki et al. in view of Hitachi LTD (JP 02-043591).**

Referring to claim 13, Schuster/Aoki et al. discloses the method of claim 11.

*Schuster/Aoki et al. does not disclose further comprising a step of generating an audible performance evaluation commentary upon visual reproduction thereof on said display unit.* However, Hitachi LTD teaches further comprising a step of generating an audible performance evaluation commentary upon visual reproduction thereof on said display unit (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include generating an audible performance evaluation commentary upon visual reproduction thereof on said display unit, as disclosed by Hitachi LTD, incorporated into Schuster/Aoki et al. in order to impress more presence to the trainee.

**13. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster/Aoki et al. and further in view of Copperman ('453) and Huston et al..**

Referring to claim 14, Schuster/Aoki et al. discloses the method of claim 11.

Schuster/Aoki et al. does not disclose wherein the replay is paused to display a still-screen image when the simulated operating environment and the performance evaluation commentary are simultaneously displayed thereon. However, Copperman ('453) teaches wherein the replay is paused (column 16 lines 5 & 6) to display a still-screen image when the simulated operating environment (column 16 lines 38 & 29: the frozen scenario. Copperman ('453) does not teach displaying the performance evaluation commentary are simultaneously displayed thereon. However, Huston et al.

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teaches the performance evaluation commentary are simultaneously displayed thereon (column 8 lines 23-26). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include displaying the performance evaluation commentary, as disclosed by Huston et al., incorporated into Schuster/Aoki et al./Copperman ('453) so that the user is able to see how the user's statistics compare to other with other users.

### ***Citation of Pertinent Prior Art***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ando (U.S. Patent Number 6,200,138) teaches a game display method, moving direction indicating method, game apparatus and drive simulating apparatus.

WU (U.S. Patent Number 6,561,952) teaches a turning control device for a virtual stationary bike.

Aiki et al. (U.S. Patent Number 6,471,586) teaches a game system and information storage medium.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kesha Frisby whose telephone number is 571-272-8774. The examiner can normally be reached on Mon. - Wed. 7-3pm & Thurs. - Fri. 7-3:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Olszewski can be reached on 571-272-6678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kyf

Kyf 1/29/2007

*Kathleen Mosser*  
KATHLEEN MOSSER  
PRIMARY EXAMINER